HEAT DETECTOR W/SELFVERIFY - BD-501/EX

Interactive fire detection systems
Product Datasheet

Technical specifications and instructions

Features

- Interactive
- Heat detector intended for use in humid areas
- Short circuit isolator in each detector
- Conforms to EMC directive
- Automatic addressing
- Additional coating of PCB circuit for environmental protection
- Proven technology
- Configurable to class A1, A1R, A2S, B, C
- With SelfVerify function for reduced maintenance/testing and increased reliability
- Not influenced by dust, humidity, exhaust gases, electromagnetic fields i.e.: radio transmitters, cellular phones, etc.
- EN 54–5/EN 54-17
- Designed to meet the requirements of the major maritime classification societies

Description / Application

BD-501/EX is a point heat detector for use in hazardous area zone 0, 1 or 2. It must be connected to the approved barrier unit BZ-500. The detector is designed for use with Autronica's interactive fire detection systems. The SelfVerify function ensures the highest grade of reliability. All units comprising this function are automatically tested with a calibrated test once every 24 hours. Additional coating of PCB and sealing of the sensing element makes this detector suitable for rough areas like heavy industry, maritime and offshore applications.

BD-501/EX is often used in areas where the environment is likely to produce false/unwanted alarms from smoke detectors such as:

- Process areas
- Workshops
- Paint stores, etc.

Schedule Drawing
No modifications permitted without reference to the Notified Body

Principle

The temperature is measured by means of a thermistor for registration and reading of temperature at the detector point. Alarms at temperature according to configured class (Ref. table 1).

SelfVerify: the detector's ability to initiate alarm at correct temperature is regularly checked.

Versions

- BD-501* Standard heat detector with SelfVerify
- BD-501/N* Heat detector with SelfVerify, Ex ic version for use in zone 2 only
- BD-501/EX Heat detector with SelfVerify, Ex ia version for use in zone 0, 1 and 2

* See separate datasheet.

CE

Technical specifications	
Weight	300 g
Material	Polycarbonate
Colour	Light grey
Sensitivity	Ref. table 1
Voltage	10 - 27 VDC
Current consumption, stand-by	< 0,3 mA
Environmental requirements	EN 54-5
Degree of protection	IP56*
Working temperature (Ta)	-20 – +80 °C
Storage temperature	-55 - +80 °C
Maximum application	Ref. table 1
Humidity (non condensing)	Maximum 95 % RH
Maintenance	None
Service	Replace if faulty
CPD certificate	1134-CPD-018
Certificates	See website
Notified body	Nemko ID No. 0470 CSA
Type examination certificate	NEMKO 03ATEX218X IECEx NEM 11.0009X
Directives and standards	2014/34/EU (ATEX) EN 60079-0:2012 EN 60079-11:2012 IEC 60079-0:2011 IEC 60079-11:2011 2014/30/EU (EMC) Immunity: EN 50130-4:2011 Emission: EN 61000-6-3:2001 CAN/CSA-C22.2 No. 0-10 CAN/CSA-C22.2 No. 205-12 CAN/CSA-60079-0-11 CAN/CSA-60079-1-11 CAN/CSA-60079-11-11 CAN/CSA-C22.2 No. 60529-05 UL 464, 9th Edition UL 60079-0, 5th Edition UL 60079-1, 6th Edition UL 60079-11, 5th Edition ANSI/IEC 60529:2004 ANSI/ISA-60079-26:2011
EX parameters	Ex II 1G Ex ia IIC T5 Ga Class 1, Zone 0, AEx ia IIC T5 Ga Ui = 15,75V Ii = 63,5mA Ci = 21,6nF Li = 0 Pi = 0,44W ***Warning**: Do not rub.*

*requires approved cable glands and/or plugs of minimum the same IP level

Product Name	Part number	Description
BD-501/EX	116-BD-501/EX	Heat detector, complete with 2 glands (type 116-6571-011.2000)
Accessories		
	116-6571-011.2000	PCK W/ 2 GLANDS ST M20X1,5 PG13,5

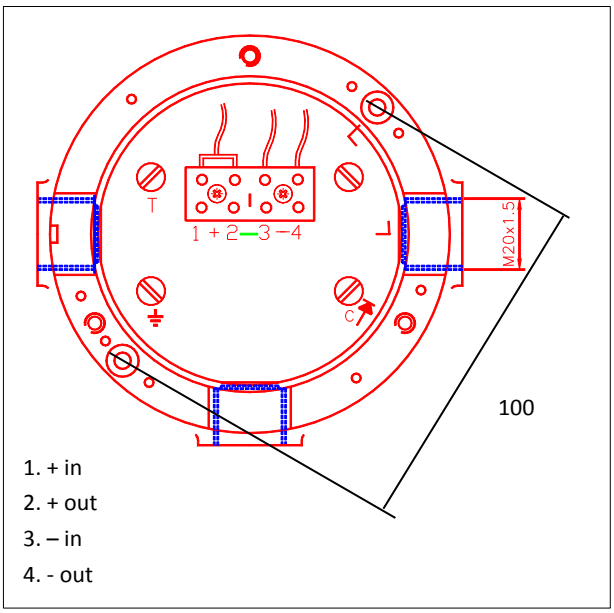
Table 1

Detector class	Typical application temperature C°	Maximum application temperature C°	Minimum application temperature C°	Maximum static response temperature C°
A1	25	50	54	65
A1R*	5	50	54	65
A2S*	25	50	54	70
B	40	65	69	85
C	55	80	84	100

* R= Rate of rise.
* S= (Slow) Does not respond below the minimum static response temperature.

Note: The detector may give pre-warning on a temperature below the max. application temperature.

Connections



1. + in
2. + out
3. – in
4. - out

Dimension Drawing (mm)